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ABSTRACT

The purpose of this study was to obtain evidence that a formal course in educational media should be required of all secondary education students at Trenton State College. In order to obtain this evidence, a questionnaire was sent to 324 public secondary school principals in New Jersey and 220 academicians at Trenton State College. Sixty-eight percent of the principals and thirty-five percent of the academicians surveyed returned the questionnaire. The questionnaire asked the subjects to rate seven educational media competencies according to their importance for secondary school teachers on a scale of 1 to 5. From eight academic approaches listed on the questionnaire, the subjects were also asked to indicate the approach they viewed as best for the development of the seven educational media competencies in secondary school teachers. It was concluded from the findings of this study that secondary school principals and academicians place "great importance" on the seven educational media competencies, and that they view a three-credit introductory course in educational media as the best academic approach for the development of educational media competencies in secondary school teachers. (Author)

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EDUCATIONAL MEDIA COMPETENCIES FOR FUTURE SECONDARY SCHOOL TEACHERS: A COMPARATIVE STUDY OF VIEWS HELD BY SECONDARY SCHOOL PRINCIPALS AND ACADEMICIANS

APPLIED EDUCATIONAL RESEARCH AND EVALUATION

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I. THE TITLE

Educational Media Competencies for Future Secondary School Teachers: A Comparative Study of Views Held by Secondary School Principals and Academicians.

II. THE STATEMENT OF THE PROBLEM

A. Is there a difference in the professional views held by secondary school principals and academicians concerning the importance of educational media competencies for secondary school teachers?

B. Is there a difference in the professional views held by secondary school principals and academicians concerning the academic approach employed for the development of educational media competencies in secondary school teachers?

III. THE HYPOTHESES

A. There is a significant difference in the mean scores on the questionnaire designed to measure the professional views between secondary school principals and academicians concerning the individual and overall importance of seven educational media competencies for secondary school teachers.

B. There is a significant difference in the responses on the questionnaire designed to measure the professional views between secondary school principals and academicians concerning the academic approach employed for the development of educational media competencies in secondary school teachers.

IV. BACKGROUND AND SIGNIFICANCE OF THE STUDY

The importance of this study to the Media Communication Science Department of Trenton State College lies with the fact that the State of New Jersey has no certification requirements for a formal course

in the area of educational media for secondary school teachers. As a result of this, the preparation of secondary school teachers in the area of educational media competencies is minimal because it is left to the discretion of the individual institutions of higher education that have teacher preparation programs.

Trenton State College is one example of many institutions of higher education in the State of New Jersey that has no curriculum policy structured toward the development of competencies in educational media for students majoring in any secondary education specialty. The reason for the absence of such a policy is that there is no single organization within the college that has primary responsibility for all students majoring in secondary education. Therefore, these students are controlled academically by the individual academic departments in which their discipline specialty lies. Although some secondary education students elect to take an introductory course in educational media, most do not and they are not advised to do so because the faculty of the various academic departments feels that an additional course in the discipline or in a related area is more important than a course in educational media. Furthermore, the faculty of these departments feels that the student can get the educational media experiences needed for teaching through an occasional lecture or demonstration in other courses or through an educational media workshop held for two or four hours in the junior or senior year.

The educational media competencies necessary for any first-year teacher are far more complex and comprehensive than that which can be covered through a brief, token experience. The secondary education student needs to become involved with the total scope of competencies

that include production, selection, utilization and evaluation of educational media for teaching. As mentioned earlier, some secondary education students are fortunate enough to take an introductory course in educational media before graduation. However, too many of these students do not receive such a course before graduation, and therefore, they are not prepared to function with educational media techniques in the process of teaching. Support for this belief is presented through the survey of the related literature.

In 1963, for example, the N.E.A. Research Division conducted an opinion poll of a cross-section of the nation's 1.5 million public school teachers to determine how their college preparation fitted them for teaching in the areas of subject knowledge, general education, psychology of learning, human development, teaching methods, history and philosophy of education and audiovisual education. A summary of the 97 percent replies showed that only 27 percent of the teachers felt that they had received too little preparation in their subject field, while 41 percent reported too little preparation in teaching methods and 60.1 percent felt that they should have had more preparation in the use of audiovisual equipment and materials.

Using the same questions as the N.E.A. study of teacher opinions, Salley (1964) polled the opinions of 900 graduating seniors in education from eight institutions of higher education throughout the State of Ohio. When compared with the N.E.A. study, the results were strikingly similar. The graduating seniors reported too little preparation in subject matter in 28.6 percent of the cases; in teaching methods, 18.8 percent; and in audiovisual education 65.6 percent.

Wheeler (1965) reported on a study conducted by the Wisconsin

State Department of Public Instruction in 1964 that was similar to the studies by N.E.A. (1963) and Salley (1964). The principal objective of this study was to determine what proportion of future teachers being prepared in Wisconsin's 52 colleges would receive formally organized (not incidental) training experiences that would equip them with the understandings and competencies needed to be skillful users of modern teaching tools and materials. The results showed that at the time of the study, 21,347 students were majoring in education in the institutions surveyed and that only 27.5 percent or 5,193 of these students would receive formally organized education in the techniques and materials of audiovisual instruction.

Aquino (1970) investigated teacher attitudes toward audiovisual instruction as they related to the teaching environments experienced by 40 teachers following a formal study in audiovisual instruction. Prior to enrollment in the graduate course entitled "Audiovisual Education," the population had experienced a mean of 6.2 years of teaching and each member had had at least one year of teaching experience. However, none had previously experienced a formal course in audiovisual instruction. Any previous instruction concerning educational media had been in the form of one-day workshops or demonstrations scattered throughout their careers. More than 90 percent of the population indicated that the only method by which they had learned about educational media was through self-instruction on a trial-and-error basis. Although some members of the population had utilized during their teaching career at least one type of projection and/or audio device, the group as a whole was unsophisticated in applying educational media to the teaching-learning process. Data

indicated that 35 percent of the population had never utilized a projected image and 12 percent had never used an electronic audio device. The course involved in the study covered the selection and utilization of educational media, application of media to the curriculum objectives, basic production techniques for audiovisual materials and communication and learning theory as applied to the previous activities. A preliminary investigation indicated that attitudes toward audiovisual instruction improved during the course of study in audiovisual instruction and subsequent measures taken at the beginning and conclusion of the population's first semester of teaching following the audiovisual education course showed a significant level of interest concerning the availability of audiovisual equipment and materials and their accessibility.

Smith (1972) attempted to determine whether college students who were exposed to many audiovisual experiences in their social studies methods course would, in turn, utilize more educational media during their first year of teaching than those students who had fewer such experiences in their methods course. Twenty social studies methods instructors at 14 Pennsylvania State Colleges were placed into two groups according to the audiovisual experiences they provided students in their social studies methods course. One group was composed of instructors who reported many audiovisual experiences and the other group contained those instructors who reported fewer audiovisual experiences. Two hundred former students of these instructors who were teaching through Pennsylvania responded to a questionnaire which asked them to indicate which of 17 forms of educational media they used most frequently in their social studies teaching. Since

each group of college instructors was represented by 100 former student questionnaire responses, the responses from each group of students were tabulated with the t-Test used to determine whether a statistical difference existed between the groups. The results revealed that, as a group, the 100 teachers who had a methods course that provided more audiovisual experiences utilized media more frequently than those who had fewer educational media experiences in their methods course. This finding was significant at the .05 level.

Although the previous studies are directly related to the field of educational media, a study similar in nature was reported by Huebner and Muller (1964). They reported that the Student Teaching Division of Northern Illinois University assessed the opinions of 249 high school principals in the 22 counties of northern Illinois through a questionnaire concerned with the University's undergraduate program for secondary school teachers. Of the 74 percent return on the 12 item questionnaire, 73 percent recommended an increase in professional education while 27 percent stated that the hours in the major be raised.

In order to change the situation at Trenton State College, additional evidence that a formal course in educational media is an important part of the secondary school teacher's needs must be presented to those people presently responsible for secondary education students. Therefore, the primary purpose of this study was to obtain that evidence and present it to the various academic departments of the college and the Academic Policies Committee in an effort to change the curriculum requirements concerning educational media experiences for secondary education students at Trenton State College. A secondary

purpose of this study was to present the evidence to the New Jersey State Department of Secondary Education and Teacher Certification in an effort to change the certification requirements for secondary school teachers in New Jersey by requiring a formal course in educational media.

V. DEFINITION OF TERMS

In order to communicate a clear understanding of this study, it is necessary to define all terms that could possibly be misinterpreted or misunderstood. Therefore, the significant terms used throughout this study are defined as follows:

A. Academic Approach: The curriculum design for teaching a particular subject area. At the college level, it is generally structured in accordance with the class contact time throughout a semester, e.g., a 3 credit course.

B. Academicians: College faculty responsible for secondary teacher education in the academic disciplines of Art, Biology, Business, Chemistry, English, Geography, Health and Physical Education, History, Mathematics, Modern Languages, Music and Political Science.

C. Certification Requirement: Part of a state statute consisting of the requirements for the licensing of teachers.

D. Departments: The divisions of an institution of higher education which are responsible for instruction in the theory and special knowledge of academic subjects.

E. Educational Media: The methods and materials of communication that are used for educational purposes, particularly in the process of teaching.

F. Educational Media Competencies: The abilities necessary to apply to practical situations the essential principles and techniques of

educational media.

G. Formal Course: Systematic presentation and study of a subject area under the direction of a teacher.

H. Media Communication Science Department: The division of Trenton State College that is responsible for instruction in the theory, practice and special knowledge of educational media.

I. Secondary School Principal: The administrative head and professional leader of a school comprising grades 7 through 12.

J. Secondary School Teacher: A professional person employed in an official capacity for the purpose of guiding and directing the academic learning experiences of students in grades 7 through 12.

VI. LIMITATIONS OF THE STUDY

Various circumstances and conditions within this study placed certain restrictions on that which the study attempted to achieve. Therefore, to provide further meaning to the study, these circumstances and conditions are identified through the limitations that follow:

A. The secondary school principal segment of the population was limited to public secondary schools in New Jersey and did not include the principals of the 172 private and parochial schools in the state.

B. The academician segment of the population was limited to Trenton State College and did not include the other seven state colleges in New Jersey.

C. The instrument that was used to collect the data had never been tested.

D. The college segment of the population was busy with final examinations and evaluations at the time of year in which the study

was made. Therefore, the academicians may not have been willing to spend the proper amount of time necessary to complete the questionnaire. This problem also existed for the secondary school principal segment of the population because of the numerous administrative details that had to be completed at this time of year.

VII. BASIC ASSUMPTIONS

In a study of this type where there was little information and no definitive evidence available, it was necessary to make the following assumptions:

A. It was logically assumed that the academicians and secondary school principals that were involved in this study were qualified as respondents to the questionnaire because of the very nature of their positions and concomitant responsibilities. The academicians are primarily responsible for the preparation of the secondary school teacher and the secondary school principals are primarily responsible for the inservice supervision and evaluation of the secondary school teacher.

B. The instrument that was employed for the collection of the data was valid because it was developed by professional educators serving on the Pennsylvania State Audiovisual Education Advisory Committee. It was slightly modified in order to meet the needs of this study. However, the modifications were made according to examples presented by Oppenheim (1966).

C. An intervening variable was the general orientation of the various segments of the population with reference to their exposure to and experience with educational media. This may have had an effect on

their views concerning the importance of educational media competencies for secondary school teachers.

D. Another intervening variable was the population's interest in the questionnaire and motivation for completing it.

VIII. PROCEDURES FOR COLLECTING DATA

The data that was collected in this study was a rating of seven educational media competencies for secondary school teachers as viewed by secondary school principals and academicians in order of importance. Data was also collected from these subjects concerning their views on the academic approach they felt should be used for the development of the educational media competencies they considered to be important for the secondary school teacher.

The sources from which the data was obtained were 76 Trenton State College academicians and 220 public secondary school principals in the State of New Jersey. A questionnaire was sent to the subjects with a cover letter prepared on Trenton State College stationery. The content of the letter was:

Dear Colleague:

The Media Communication Science Department of Trenton State College is in the process of evaluating its curriculum offerings for students majoring in secondary education.

As one who is familiar with the needs of secondary school teachers, we would appreciate your views concerning how we may best serve the needs of the future secondary school teacher in the area of educational media competencies.

Please complete the enclosed questionnaire and return it in the self-addressed envelope by May 29, 1974.

Thank you in advance for your cooperation in this matter.

The questionnaire was constructed as follows:

QUESTIONNAIRE

MEDIA COMPETENCIES FOR SECONDARY SCHOOL TEACHERS

DIRECTIONS: For each educational media competency listed below, please indicate your view regardings its importance for the secondary school teacher by circling the appropriate number.

The scale to be used is as follows:

5 - Of very great importance

4 - Of great importance

3 - Of some importance

2 - Of limited importance

1 - Of no importance

A. Knowledge of a wide variety of instructional media available in the teacher's curricular specialization. --- 1 --- 2 --- 3 --- 4 --- 5

B. Ability to select the media that possess the potential to meet the desired teacher-student objectives. --- 1 --- 2 --- 3 --- 4 --- 5

C. Ability to design and produce a variety of materials for use in the teaching-learning process. --- 1 --- 2 --- 3 --- 4 --- 5

D. Ability to integrate media with the subject content for achieving objectives. --- 1 --- 2 --- 3 --- 4 --- 5

E. Knowledge of a variety of utilization practices and their probable effectiveness in the learning process. --- 1 --- 2 --- 3 --- 4 --- 5

F. Ability to operate the common equipment of educational media and technology. --- 1 --- 2 --- 3 --- 4 --- 5

G. Ability to evaluate the effectiveness of media in terms of the teacher's objectives. --- 1 --- 2 --- 3 --- 4 --- 5

DIRECTIONS: Check ONE academic approach you view as best for the development of these competencies.

1. _____ A 3 credit introductory course in educational media.
2. _____ A 2 credit introductory course in educational media.
3. _____ A 1 credit introductory course in educational media.
4. _____ Integrated with general education methods courses.
5. _____ Integrated with academic specialty courses.
6. _____ Integrated with professional field experience.
7. _____ Developed through a self-instructional program administered by the college media department.
8. _____ Developed through in-service programs administered by the secondary school.

IX. PROCEDURES FOR TREATING DATA

The first of the two hypotheses stated earlier under section III

involved eight subhypotheses. Therefore, the null and alternative subhypotheses that were tested in this study are:

H_o1: There is no significant difference in the mean scores on the questionnaire designed to measure the professional views between secondary school principals and academicians concerning the importance of educational media competency A which involves knowledge of a wide variety of instructional media available in the teacher's curricular specialization.

H_a1: There is a significant difference in the mean scores on the questionnaire designed to measure the professional views between secondary school principals and academicians concerning the importance of educational media competency A which involves knowledge of a wide variety of instructional media available in the teacher's curricular specialization.

H_o2: There is no significant difference in the mean scores on the questionnaire designed to measure the professional views between secondary school principals and academicians concerning the importance of educational media competency B which involves the ability to select the media that possess the potential to meet the desired teacher-student objectives.

H_a2: There is a significant difference in the mean scores on the questionnaire designed to measure the professional views between secondary school teachers and academicians concerning the importance of educational media

competency B which involves the ability to select the media that possess the potential to meet the desired teacher-student objectives.

H_o3: There is no significant difference in the mean scores on the questionnaire designed to measure the professional views between secondary school principals and academicians concerning the importance of educational media competency C which involves the ability to design and produce a variety of materials for use in the teaching-learning process.

H_a3: There is a significant difference in the mean scores on the questionnaire designed to measure the professional views between secondary school principals and academicians concerning the importance of educational media competency C which involves the ability to design and produce a variety of materials for use in the teaching-learning process.

H_o4: There is no significant difference in the mean scores on the questionnaire designed to measure the professional views between secondary school principals and academicians concerning the importance of educational media competency D which involves the ability to integrate media with the subject content for achieving objectives.

H_a4: There is a significant difference in the mean scores on the questionnaire designed to measure the professional views between secondary school principals and academicians concerning the importance of educational media

competency D which involves the ability to integrate media with the subject content for achieving objectives.

H_o5: There is no significant difference in the mean scores on the questionnaire designed to measure the professional views between secondary school principals and academicians concerning the importance of educational media competency E which involves knowledge of a variety of utilization practices and their probable effectiveness in the learning process.

H_a5: There is a significant difference in the mean scores on the questionnaire designed to measure the professional views between secondary school principals and academicians concerning the importance of educational media competency E which involves knowledge of a variety of utilization practices and their probable effectiveness in the learning process.

H_o6: There is no significant difference in the mean scores on the questionnaire designed to measure the professional views between secondary school principals and academicians concerning the importance of educational media competency F which involves the ability to operate the common equipment of educational media and technology.

H_a6: There is a significant difference in the mean scores on the questionnaire designed to measure the professional views between secondary school principals and academicians concerning the importance of educational media competency F which involves the ability to operate the

common equipment of educational media and technology.

H_o7: There is no significant difference in the mean scores on the questionnaire designed to measure the professional views between secondary school principals and academicians concerning the importance of educational media competency G which involves the ability to evaluate the effectiveness of media in terms of the teache.'s objectives.

H_a7: There is a significant difference in the mean scores on the questionnaire designed to measure the professional views between secondary school principals and academicians concerning the importance of educational media competency G which involves the ability to evaluate the effectiveness of media in terms of the teacher's objectives.

H_o8: There is no significant difference in the mean scores on the questionnaire designed to measure the professional views between secondary school principals and academicians concerning the overall importance of the seven educational media competencies for secondary school teachers.

H_a8 There is a significant difference in the mean scores on the questionnaire designed to measure the professional views between secondary school principals and academicians concerning the overall importance of the seven educational media competencies for secondary school teachers.

The second of the two hypotheses stated earlier under section III were tested according to the following null and alternative hypotheses:

H_o9: There is no significant difference in the responses on the questionnaire designed to measure the professional views between secondary school principals and academicians concerning the academic approach employed for the development of educational media competencies in secondary school teachers.

H_a9: There is a significant difference in the responses on the questionnaire designed to measure the professional views between secondary school principals and academicians concerning the academic approach employed for the development of educational media competencies in secondary school teachers.

The statistical techniques that were employed for testing the hypotheses are:

Hypothesis 1: The t-Test for significance at the .05 level was used to compare the mean scores between the secondary school principals and academicians concerning the importance of educational media competency A.

Hypothesis 2: The t-Test for significance at the .05 level was used to compare the mean scores between the secondary school principals and academicians concerning the importance of educational media competency B.

Hypothesis 3: The t-Test for significance at the .05 level

was used to compare the mean scores between the secondary school principals and academicians concerning the importance of educational media competency C.

Hypothesis 4: The t-Test for significance at the .05 level was used to compare the mean scores between the secondary school principals and academicians concerning the importance of educational media competency D.

Hypothesis 5: The t-Test for significance at the .05 level was used to compare the mean scores between the secondary school principals and academicians concerning the importance of educational media competency E.

Hypothesis 6: The t-Test for significance at the .05 level was used to compare the mean scores between the secondary school principals and academicians concerning the importance of educational media competency F.

Hypothesis 7: The t-Test for significance at the .05 level was used to compare the mean scores between the secondary school principals and academicians concerning the importance of educational media competency G.

Hypothesis 8: The t-Test for significance at the .05 level was used to compare the mean scores between the secondary school principals and academicians

concerning the overall importance of the seven educational media competencies for secondary school teachers.

Hypothesis 9: The Chi Square Test for significance at the .05 level was used to compare the responses between the secondary school principals and academicians views concerning the academic approach employed for the development of educational media competencies in secondary school teachers.

X. DATA RESULTING FROM THE STUDY

The data presented in the following tables is a result of the questionnaires returned from 220 public secondary school principals in New Jersey and 76 academicians from Trenton State College. Since the questionnaire was sent to 324 secondary school principals and 220 academicians, the data represents 68 percent of the principals and 35 percent of the academicians surveyed.

Summarized in Table 1 is the raw data that resulted from the respondents of both groups concerning their value rating of importance for each of the seven educational media competencies. From this raw data, the rating percentages for each group involving each competency were reached and are presented in Table 2. Table 3 was developed from the raw data presented in Table 1 and shows the ratings for the combined groups concerning each competency. These combined ratings were computed into percentages and are presented in Table 4.

As mentioned earlier, the first hypothesis of this study, which involves eight subhypotheses, was tested through the computation of

t-Tests to compare the mean scores of the secondary school principals and academicians on each educational media competency and the overall competencies. This was achieved by using the following formula:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\left(\frac{\sum X_1^2 + \sum X_2^2}{N_1 + N_2 - 2}\right)\left(\frac{1}{N_1} + \frac{1}{N_2}\right)}}$$

The results of this computation are presented in Table 5 and show the t-ratio for each of the eight subhypotheses.

The data used to test the second hypothesis of this study is presented in Tables 6 and 7. The Chi Square Test of Independence was applied with this data to test for a significant difference in the responses between the principals and academicians concerning their views in regard to the best academic approach for the development of educational media competencies in secondary school teachers. The results of this test and the formula used are shown at the bottom of Table 7.

As a supplement to the Chi Square Test, Table 8 presents the percent distribution for the secondary school principals and the academicians with regard to their responses concerning the academic approach. It also shows the percent distribution for the combined groups.

XI. ANALYSIS OF DATA

As indicated in Table 5, the calculated value of t does not exceed the critical value of t at the .05 level with two hundred and ninety-four degrees of freedom on a two-tailed test for subhypotheses

TABLE 1

RATING FREQUENCIES FOR SECONDARY SCHOOL PRINCIPALS AND ACADEMICIANS CONCERNING THE IMPORTANCE OF SEVEN EDUCATIONAL MEDIA COMPETENCIES FOR SECONDARY SCHOOL TEACHERS

GROUPS	RATING VALUE	EDUCATIONAL MEDIA COMPETENCIES A	B	C	D	E	F	G
	5	119	124	29	128	70	81	114
SECONDARY	4	80	79	68	73	100	67	85
SCHOOL	3	14	12	102	13	42	63	12
PRINCIPALS	2	3	1	17	2	4	5	5
	1	4	4	4	4	4	4	4
	TOTAL	220	220	220	220	220	220	220
	5	43	41	14	40	19	36	25
	4	17	24	29	20	28	19	32
ACADEMICIANS	3	9	4	24	8	19	14	10
	2	3	2	7	4	8	4	5
	1	4	5	2	4	2	3	4
	TOTAL	76	76	76	76	76	76	76

TABLE 2

RATING PERCENTAGES FOR SECONDARY SCHOOL PRINCIPALS AND ACADEMICIANS CONCERNING THE IMPORTANCE OF SEVEN EDUCATIONAL MEDIA COMPETENCIES FOR SECONDARY SCHOOL TEACHERS

GROUPS	RATING VALUE	EDUCATIONAL MEDIA COMPETENCIES A %	B %	C %	D %	E %	F %	G %
	5	54.1	56.4	13.2	58.2	31.8	36.8	51.8
SECONDARY	4	36.4	35.9	30.9	33.2	45.5	30.5	38.6
SCHOOL	3	6.4	5.5	46.4	5.9	19.1	28.6	5.5
PRINCIPALS	2	1.4	0.5	7.7	0.9	1.8	2.3	2.3
	1	1.8	1.8	1.8	1.8	1.8	1.8	1.8
	5	56.6	53.9	18.4	52.6	25.0	47.4	32.9
	4	22.4	31.6	38.2	26.3	36.8	25.0	42.1
ACADEMICIANS	3	11.8	5.3	31.6	10.5	25.0	18.4	13.2
	2	3.9	2.6	9.2	5.3	10.5	5.3	6.6
	1	5.3	6.6	2.6	5.3	2.6	3.9	5.3

TABLE 3

RATING FREQUENCIES FOR THE COMBINED GROUPS OF SECONDARY SCHOOL PRINCIPALS AND ACADEMICIANS CONCERNING THE IMPORTANCE OF SEVEN EDUCATIONAL MEDIA COMPETENCIES FOR SECONDARY SCHOOL TEACHERS

GROUPS	RATING VALUE	EDUCATIONAL MEDIA COMPETENCIES A	B	C	D	E	F	G
SECONDARY	5	162	165	43	168	89	117	139
SCHOOL	4	97	103	97	93	128	86	117
PRINCIPALS	3	23	16	126	21	61	77	22
AND	2	6	3	24	6	12	9	10
ACADEMICIANS	1	8	9	6	8	6	7	8
	TOTAL	296	296	296	296	296	296	296

TABLE 4

COMBINED RATING PERCENTAGES FOR SECONDARY SCHOOL PRINCIPALS AND ACADEMICIANS CONCERNING THE IMPORTANCE OF SEVEN EDUCATIONAL MEDIA COMPETENCIES FOR SECONDARY SCHOOL TEACHERS

GROUPS	RATING VALUE	EDUCATIONAL MEDIA COMPETENCIES A %	B %	C %	D %	E %	F %	G %
SECONDARY	5	54.7	55.7	14.5	56.8	30.1	39.5	47.0
SCHOOL	4	32.8	34.8	32.8	31.4	43.2	29.1	39.5
PRINCIPALS	3	7.8	5.4	42.6	7.1	20.6	26.0	7.4
AND	2	2.0	1.0	8.1	2.0	4.1	3.0	3.4
ACADEMICIANS	1	2.7	3.0	2.0	2.7	2.0	2.4	2.7

TABLE 5

COMPARISON OF MEAN SCORES BETWEEN SECONDARY SCHOOL PRINCIPALS AND ACADEMICIANS CONCERNING THE INDIVIDUAL AND OVERALL IMPORTANCE OF SEVEN EDUCATIONAL MEDIA COMPETENCIES FOR SECONDARY SCHOOL TEACHERS

HYPOTHESIS	GROUP	N	$\bar{X}$	SD	SE	DF	t	SIGNIFICANCE
1	PRINCIPALS	220	4.395	0.816	0.121	294	1.528	N.S.
	ACADEMICIANS	76	4.211	1.128				
2	PRINCIPALS	220	4.445	0.776	0.117	294	1.788	N.S.
	ACADEMICIANS	76	4.237	1.111				
3	PRINCIPALS	220	3.459	0.881	0.121	294	-1.209	N.S.
	ACADEMICIANS	76	3.605	0.974				
4	PRINCIPALS	220	4.450	0.799	0.120	294	2.437	S at .05 and .02
	ACADEMICIANS	76	4.158	1.136				
5	PRINCIPALS	220	4.036	0.863	0.122	294	2.681	S at .05 and .01
	ACADEMICIANS	76	3.711	1.036				
6	PRINCIPALS	220	3.982	0.953	0.133	294	-0.633	N.S.
	ACADEMICIANS	76	4.066	1.104				
7	PRINCIPALS	220	4.364	0.834	0.121	294	3.766	S at .05 and .001
	ACADEMICIANS	76	3.908	1.090				
8	PRINCIPALS	220	4.162	0.602	0.093	294	1.906	N.S.
	ACADEMICIANS	76	3.985	0.911				

TABLE 6

OBSERVED FREQUENCIES OF RESPONSES OF SECONDARY SCHOOL PRINCIPALS AND ACADEMICIANS CONCERNING THEIR VIEWS WITH REGARD TO THE BEST ACADEMIC APPROACH FOR THE DEVELOPMENT OF EDUCATIONAL MEDIA COMPETENCIES IN SECONDARY SCHOOL TEACHERS

GROUPS	ACADEMIC APPROACHES 1	2	3	4	5	6	7	8	TOTAL
PRINCIPALS	78	11	2	28	38	13	15	35	220
ACADEMICIANS	22	10	2	12	9	13	4	4	76
TOTAL	100	21	4	40	47	26	19	39	296

TABLE 7

EXPECTED FREQUENCIES OF RESPONSES OF SECONDARY SCHOOL PRINCIPALS AND ACADEMICIANS CONCERNING THEIR VIEWS WITH REGARD TO THE BEST ACADEMIC APPROACH FOR THE DEVELOPMENT OF EDUCATIONAL MEDIA COMPETENCIES IN SECONDARY SCHOOL TEACHERS

GROUPS	ACADEMIC APPROACHES 1	2	3	4	5	6	7	8	TOTAL
PRINCIPALS	74	16	3	30	35	19	14	29	220
ACADEMICIANS	26	5	1	10	12	7	5	10	76
TOTAL	100	21	4	40	47	26	19	39	296

$X^2 = 21.821$ and is significant at the .05 and .01 levels with seven degrees of freedom on a two-tailed test. This was calculated by using the data in the above tables with the following formula:

$$X^2 = \sum \left[\frac{(fo - fe)^2}{fe} \right]$$

TABLE 8

PERCENTAGE DISTRIBUTION OF RESPONSES OF SECONDARY SCHOOL PRINCIPALS AND ACADEMICIANS AND BOTH GROUPS COMBINED CONCERNING THEIR VIEWS WITH REGARD TO THE BEST ACADEMIC APPROACH FOR THE DEVELOPMENT OF EDUCATIONAL MEDIA COMPETENCIES IN SECONDARY SCHOOL TEACHERS

GROUPS	ACADEMIC APPROACHES							
	1 %	2 %	3 %	4 %	5 %	6 %	7 %	8 %
PRINCIPALS	35.5	5.0	0.9	12.7	17.3	5.9	6.8	15.9
ACADEMICIANS	28.9	13.2	2.6	15.8	11.8	17.1	5.3	5.3
GROUPS COMBINED	33.8	7.1	1.4	13.5	15.9	8.8	6.4	13.1

1, 2, 3, 6, and 8. Therefore, the null hypotheses cannot be rejected since there is no significant difference in the mean scores between secondary school principals and academicians concerning the importance of educational media competencies A, B, C, F, and the overall competencies.

This was not the case for subhypotheses 4, 5, and 7 where a significant difference in the mean scores was found. The calculated value of t exceeded the critical value of t for subhypothesis 4 at the .05 and .02 levels, subhypothesis 5 at the .05 and .01 levels and subhypothesis 7 at the .05 and .001 levels. Therefore, the null hypotheses in these cases are rejected and the alternative hypotheses are accepted since there is a significant difference in the mean scores between secondary school principals and academicians concerning the importance of educational media competencies D, E, and G. In all of these cases, the secondary school principals rated the three competencies with greater importance than the academicians.

Although a significant difference in the mean scores between the two groups was found in three of the seven educational media competencies, there was no significant difference found in their mean scores on the importance of the educational media competencies overall. Furthermore, the mean scores of both groups show that they place a value of "great importance" on the competencies overall. However, it is important to note that the mean scores of both groups for competency C - subhypothesis 3 show a value rating of "some importance."

Summarized in Tables 6 and 7 is the data used in the Chi Square Test of hypothesis 9. The results of this test show that the calculated value of X^2 exceeds the critical value of X^2 at the .05 and .01

levels with seven degrees of freedom on a two-tailed test. Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted since there is a significant difference in the responses between the secondary school principals and the academicians concerning their views with regard to the academic approach employed for the development of educational media competencies in secondary school teachers. The evidence shows that secondary school principals are more positive in their views than academicians concerning a three-credit introductory course for the development of the competencies in secondary school teachers. However, although there is a significant difference in their views concerning the eight academic approaches, the percentage of those subjects in each group favoring a three-credit course is greater than the percentage of those subjects favoring any other academic approach.

XII. CONCLUSIONS AND SIGNIFICANCE

The following conclusions were judged to be supported by the findings of this study:

A. The secondary school principals and academicians view educational media competencies A, B, and F as having "great importance" for the secondary school teacher.

B. The secondary school principals view educational media competencies D, E, and G with greater importance than the academicians.

C. Educational media competency C is viewed by the secondary school principals and academicians as having "some importance" for the secondary school teacher.

D. The secondary school principals and academicians view the overall educational media competencies as having "great importance" for the

secondary school teacher.

E. The percentage of secondary school principals favoring a three credit introductory course in educational media for secondary school teachers is greater than the percentage of academicians favoring such an academic approach.

F. The percentage of secondary school principals and the percentage of academicians favoring a three-credit introductory course in educational media for secondary school teachers is greater than their percentages for any of the other seven academic approaches.

These conclusions have the following significant implications for the secondary education program at Trenton State College:

A. Since the secondary education students at Trenton State College presently receive limited exposure to educational media through a two or four hour workshop in the junior year, they are not being prepared in the area of educational media according to the secondary school principals and academicians views that a three-credit introductory course be employed for the development of educational media competencies.

B. In order to prepare the future secondary school teacher according to the views of the secondary school principals who will employ them and the academicians who prepare them for teaching, Trenton State College should require all secondary education students to take a three-credit introductory course in educational media before graduation.

XIII. FURTHER STUDIES

Although the findings of this study can be generalized with some degree of validity to other institutions of higher education in New

Jersey and other states, further research in the following areas might prove valuable:

A. Other institutions in New Jersey should use the questionnaire employed in this study and survey their academicians for comparison with the data already collected from New Jersey secondary school principals. If such studies were done, conclusive evidence may be obtained that could change the state certification requirements for secondary school teachers in the area of educational media.

B. This study should be duplicated by institutions of higher education in other states that have no requirement for a formal course in educational media for secondary education students.

C. A study should be made of Trenton State College graduates in their first year of secondary school teaching in order to determine how their views compare with the findings of this study.

XIV. PARTICIPANTS SUMMARY STATEMENTS

This study has provided the Media Communication Science Department of Trenton State College with the evidence needed to change the curriculum requirements for secondary education students in the area of educational media. The study will be submitted to President Clayton Brower and the Academic Policies Committee for consideration of the recommended change in the curriculum requirements.

Since the College will be evaluated by N.C.A.T.E. in December, 1974, the study will be submitted to this organization as part of the Media Communication Science Department's self-evaluation report.

The results of this study have provided the Educational Media Department of West Chester State College with evidence that the three-credit course in educational media presently available to

secondary education students is adequate. However, the course is available only in the elective grouping and is not generally selected by the secondary education students because of a very tight academic schedule of required courses which leaves no time available for electives.

Since this has been a problem for many years, the findings of this study may present some evidence that a change in the requirements should occur to provide the students with the course. Therefore, the study will be presented to the Dean of the School of Education, the Deans of other academic areas, the Pennsylvania Intermediate Unit Boards and the Pennsylvania Board of Teacher Certification.

Since the philosophy of the Pennsylvania State Department of Education expresses a concern for competency based programs for all teachers, the evidence presented by this study should cause serious consideration for requiring all secondary education students to have a three-credit course in educational media.

State of New Jersey
TRENTON STATE COLLEGE
TRENTON, N. J. 08625

May 21, 1974

Dear Colleague:

The Media Communication Science Department of Trenton State College is in the process of evaluating its curriculum offerings for students majoring in secondary education.

As one who is familiar with the needs of secondary school teachers, we would appreciate your views concerning how we may best serve the needs of the future secondary school teacher in the area of educational media competencies.

Please complete the enclosed questionnaire and return it in the self-addressed envelope by May 29, 1974.

Thank you in advance for your cooperation in this matter.

Very truly yours,

Francis A. Romano, Jr.

Francis A. Romano, Jr.
Associate Professor
Media Communication Science
Department

APPENDIX B

QUESTIONNAIRE

MEDIA COMPETENCIES FOR SECONDARY SCHOOL TEACHERS

DIRECTIONS: For each educational media competency listed below, please indicate your view regarding its importance for the secondary school teacher by circling the appropriate number.

The scale to be used is as follows:

5 - Of very great importance
4 - Of great importance
3 - Of some importance
2 - Of limited importance
1 - Of no importance

A. Knowledge of a wide variety of instructional media available in the teacher's curricular specialization. --- 1 --- 2 --- 3 --- 4 --- 5

B. Ability to select the media that possess the potential to meet the desired teacher-student objectives. --- 1 --- 2 --- 3 --- 4 --- 5

C. Ability to design and produce a variety of materials for use in the teaching-learning process. --- 1 --- 2 --- 3 --- 4 --- 5

D. Ability to integrate media with the subject content for achieving objectives. --- 1 --- 2 --- 3 --- 4 --- 5

E. Knowledge of a variety of utilization practices and their probable effectiveness in the learning process. --- 1 --- 2 --- 3 --- 4 --- 5

F. Ability to operate the common equipment of educational media and technology. --- 1 --- 2 --- 3 --- 4 --- 5

G. Ability to evaluate the effectiveness of media in terms of the teacher's objectives. --- 1 --- 2 --- 3 --- 4 --- 5

DIRECTIONS: Check <u>ONE</u> academic approach you view as best for the development of these competencies.

1. _____ A 3 credit introductory course in educational media.
2. _____ A 2 credit introductory course in educational media.
3. _____ A 1 credit introductory course in educational media.
4. _____ Integrated with general education methods courses.
5. _____ Integrated with academic specialty courses.
6. _____ Integrated with professional field experience.
7. _____ Developed through a self-instructional program administered by the college media department.
8. _____ Developed through in-service programs administered by the secondary school.

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